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United States Department of the Interior, J. A. Krug, Secretary
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Fishery Leaflet 282

Washington, D. C. January 1948

THE BLUE CRAB, *Callinectes sapidus*

Prepared in the Division of Fishery Biology

Blue crabs have an extensive range along the Atlantic coast--from Massachusetts at least to the northern part of South America. They are animals of the shallow bays, sounds, and river channels, seldom found far out at sea, sometimes reported in fresh water. In summer the crabs live close inshore, but in winter move off into deeper water to escape the cold. They do not appear to migrate extensively up and down the coast; probably each section has its own local population.

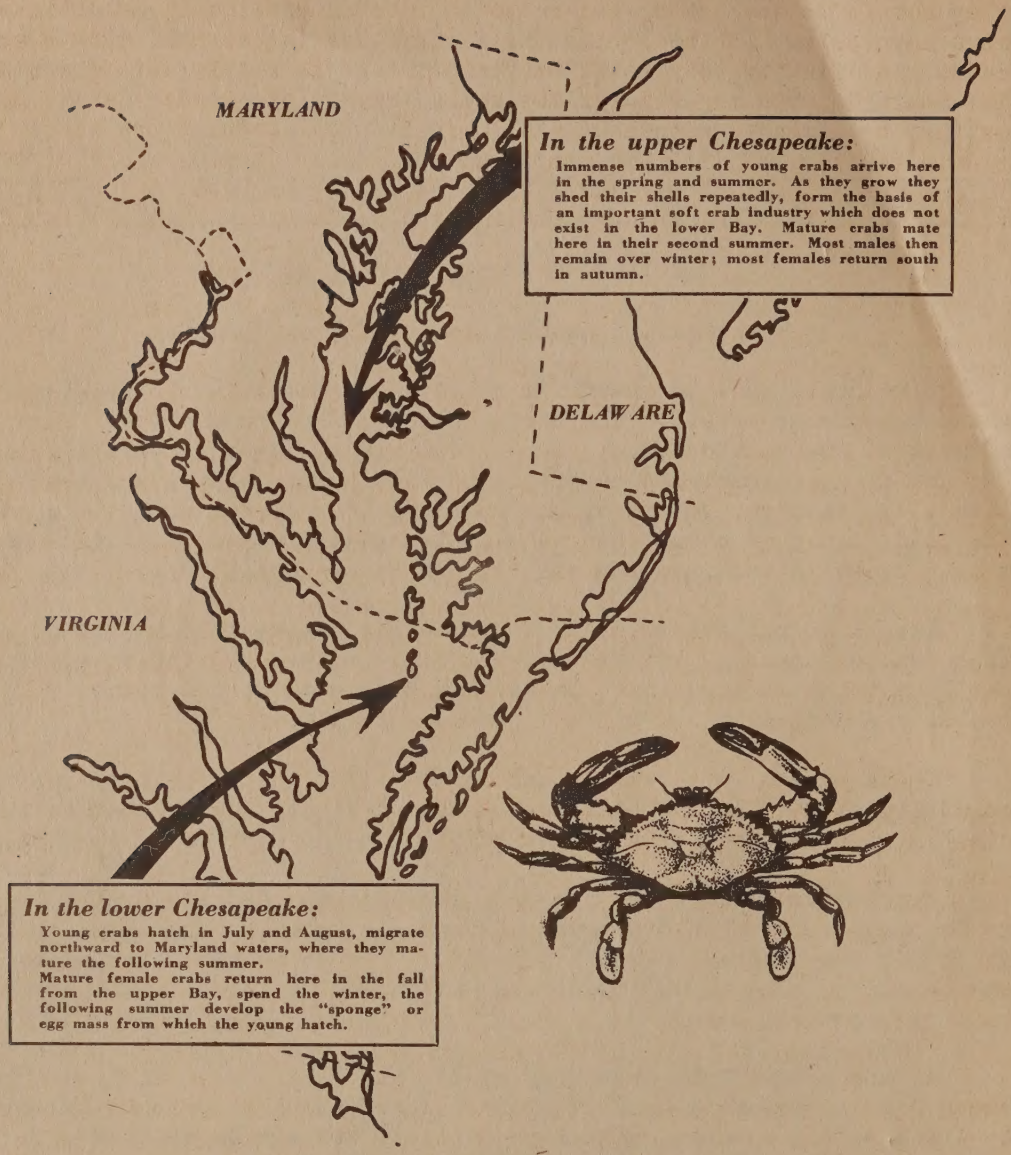
The blue crab resources of the Atlantic coast yield nearly 80 million pounds annually, of which 60 per cent is taken in the waters from New York to North Carolina. Chesapeake Bay is the chief source of crabs, yielding about 42 million pounds annually.

Crabs have an interesting and complex life history, which has been carefully studied in the Chesapeake. The seasonal migrations are especially important, having a direct bearing on the problem of conservation.

Every year between the first of June and the end of August, a new generation of crabs is produced. The female extrudes the eggs, each about one one-hundredth inch in diameter. These remain attached to the female in a large yellowish mass known as the sponge. The eggs hatch in about 15 days.

As the young crabs grow they shed their shells repeatedly and in about a month assume a crablike form. Thereafter the crab molts about 15 times before reaching maturity--at first every 6 days, then after gradually lengthening periods until about 25 days elapse between the final molts. Ordinarily the crab gains about one-third in size with each molt. Crabs reach their full growth and maturity, and cease to molt, during their second summer when 12 to 14 months old.

The so-called "soft crab" is not a distinct species; the term is applied to any crab that has shed its old shell in the interval until the new shell has hardened. As the soft-shelled crab is considered especially choice, large numbers of young crabs are sought in the spring and summer while they are still molting. It is customary to place crabs that show definite signs of approaching the shedding stage in floats.


MARYLAND
In the upper Chesapeake:
Immense numbers of young crabs arrive here in the spring and summer. As they grow they shed their shells repeatedly, form the basis of an important soft crab industry which does not exist in the lower Bay. Mature crabs mate here in their second summer. Most males then remain over winter; most females return south in autumn.
DELAWARE
VIRGINIA
In the lower Chesapeake:
Young crabs hatch in July and August, migrate northward to Maryland waters, where they mature the following summer.
Mature female crabs return here in the fall from the upper Bay, spend the winter, the following summer develop the "sponge" or egg mass from which the young hatch.

If thus imprisoned too early, however, the crab will die without shedding; hence State laws prohibit the impoundment of crabs which have not reached the "peeler" stage. A peeler crab can be detected by a pink "sign" on the last pair of legs, indicating that the new shell is fully formed underneath the old one.

Usually the first spawning takes place when the female is about 2 years old. Some females are believed to live over another winter and deposit more eggs when 3 years old; probably few or none live longer than this. Presumably the life span of the male is about the same length.

Most of the young crabs hatched in the lower Chesapeake Bay soon begin a northward migration. Cold weather interrupts this journey, and they settle to the bottom and cease to feed or grow until conditions are more favorable. In the spring their migration is resumed, growth proceeds, and finally they reach Maryland waters as nearly mature crabs. The mating of the majority of the crabs takes place in Maryland. After mating, the females return to the lower Bay, but most of the males remain behind, spending the winter in deep holes or creeks and rivers. Only about a fifth of the crabs taken in the lower part of the Bay during the winter are males. Nearly all the sponge bearing crabs are found in Virginia waters.

Soft crabs are shipped alive to market, while most hard crabs are steamed near the place of capture, the meat picked out of the shell, and shipped to market in iced containers. Crab meat is also canned in some sections of the country, especially in South Carolina and Louisiana.

At the present time, the most important markets for fresh crab are the cities of the Atlantic seaboard. Improved handling and marketing facilities, and the further development of the canning industry, will probably create wider markets in the near future. However, the conservation problem remains to be solved. The Chesapeake crab fishery has been subject, throughout its history, to extreme fluctuations in yield, catches ranging from 20 to 60 million pounds. Studies are now under way to learn whether it is possible to control these natural fluctuations, and so stabilize production.

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The life history of the blue crab (Callinectes sapidus). In Report, U. S. Bureau of Fisheries for 1904, pp. 415-432.

Churchill, E. P., Jr.
Life history of the blue crab. In Bulletin, U. S. Bureau of Fisheries, Vol. 36, 1917-1918, pp. 93-128, pls. 47-55.

NOTE: Both of the above publications are now out of print, but they may be consulted in many of the public libraries designated as Government depositories.

Evans, Prentiss W.
The Chesapeake Bay soft crab industry. Fishery Leaflet 184, 1946.

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Edible crabs. Fishery Leaflet 71, 1945.

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